

10/587969
IAP11 Rec'd PCT/PTO 03 AUG 2006

Claims

1. A scheduling device for scheduling data transmission over a plurality of channels in a data network, said device comprising
 - 5 a) monitoring means (204) for monitoring a predetermined parameter indicating a channel capacity in a received data stream of at least one of said plurality of channels; and
 - b) scheduling means (202) for determining a request for change of the maximum channel capacity allocated to said at least one of said plurality of channels, if the value of said monitored predetermined parameter falls
10 outside a predetermined allowed range.
2. A device according to claim 1, wherein said maximum channel capacity corresponds to a maximum allowed data rate.
3. A device according to claim 2, wherein said maximum allowed data rate is set by a maximum transport format combination.
- 15 4. A device according to any one of the preceding claims, wherein said monitoring means is configured to derive said value of said predetermined parameter by decoding a transport format combination indication information provided in said received data stream.
- 20 5. A device according to any one of the preceding claims, wherein said scheduling means (202) is configured to check the available resources and to reject said determined request in response to the checking result.
- 25 6. A device according to any one of the preceding claims, wherein said scheduling means (202) is configured to check the available resources and to increase said maximum channel capacity to a value smaller than said value of said monitored predetermined parameter in response to the checking result, if said request has been determined.
- 30 7. A device according to any one of the preceding claims, wherein said scheduling means (202) is configured to check the available resources and to increase said maximum channel capacity to said value of said monitored predetermined parameter in response to the checking result, if said request has been determined.

8. A device according to claim 5 or 6, wherein said scheduling means (202) is configured to repeat said checking at a predetermined timing.
9. A device according to any one of the preceding claims, wherein said plurality of channels are dedicated uplink channels of a radio access network.
- 5 10. A device according to any one of the preceding claims, wherein said scheduling device (202) is a base station device.
- 10 11. A terminal device for transmitting data via at least one data channel to a data network, said terminal device (10) being configured to set a predetermined parameter indicating a channel capacity to a value outside a predetermined allowed range, in order to request a change of the maximum channel capacity.
12. A terminal device according to claim 11, wherein said value is selected from a predetermined temporary range comprising values higher than said allowed range.
- 15 13. A terminal device according to claim 12, wherein the use of said value of said temporary range is restricted to a predetermined time period.
14. A terminal device according to claim 13, wherein said use of said value of said temporary range can be repeated at a predetermined timing.
- 20 15. A terminal device according to any one of claims 12 to 14, wherein said temporary range comprises at least one value.
16. A terminal device according to any one of claims 11 to 15, wherein said predetermined parameter indicates a transport format combination.
17. A terminal device according to any one of claims 11 to 16, wherein said terminal device is a cellular terminal device.
- 25 18. A scheduling method of scheduling data transmission over a plurality of channels in a data network, said method comprising the steps of:
 - a) monitoring a predetermined parameter indicating a channel capacity in a received data stream of at least one of said plurality of channels; and

- b) determining a request for change of the maximum channel capacity allocated to said at least one of said plurality of channels, if the value of said monitored predetermined parameter falls outside a predetermined allowed range.
- 5 19. A method according to claim 18, wherein said maximum channel capacity corresponds to a maximum allowed data rate.
20. A method according to claim 19, further comprising the step of setting said maximum allowed data rate by a maximum allowed transport format combination.
- 10 21. A method according to claim 20, wherein said monitoring step comprises the step of deriving said value of said predetermined parameter by decoding a transport format combination indication information provided in said received data stream.
- 15 22. A method according to any one of claims 18 to 21, further comprising the steps of checking available resources and rejecting said determined request in response to the result of said checking step.
- 20 23. A method according to any one of claims 18 to 22, further comprising the steps of checking the available resources and increasing said maximum channel capacity to a value smaller than said value of said monitored predetermined parameter in response to the result of said checking step, if said request has been determined.
- 25 24. A method according to any one of claims 18 to 23, further comprising the steps of checking the available resources and increasing said maximum channel capacity to said value of said monitored predetermined parameter in response to the result of said checking step, if said request has been determined.
- 30 25. A method according to claim 22 or 23, further comprising the step of repeating said checking at a predetermined timing.
26. A system for scheduling data transmission over a plurality of channels in a data network, said system comprising a terminal device as claimed in any

one of claims 11 to 17 and a scheduling device as claimed in any one of claims 1 to 10.